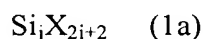


IN THE CLAIMS

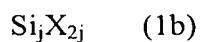
**The claims are not amended. They are listed here for the Examiner's convenience.**

Claim 1 (Cancelled)

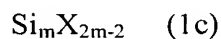
Claim 2 (Previously Presented): The method of claim 4, wherein the silicon compound is at least one compound selected from the group consisting of compounds represented by the following formulae (1a) to (1d):



(wherein X is a hydrogen atom, a halogen atom or a monovalent organic group, and i is an integer of 2 or larger),



(wherein X is a hydrogen atom, a halogen atom or a monovalent organic group, and j is an integer of 3 or larger),



(wherein X is a hydrogen atom, a halogen atom or a monovalent organic group, and m is an integer of 4 or larger),



(wherein X is a hydrogen atom, a halogen atom or a monovalent organic group, and k is 6, 8 or 10).

Claim 3 (Previously Presented): The method of claim 4, wherein the cobalt compound is a cobalt complex having at least either one of a CO ligand or a  $\pi$  ligand.

Claim 4 (Previously Presented): A method for forming a silicon-cobalt film which comprises:

forming a coating film of a silicon-cobalt film forming composition comprising a silicon compound and a cobalt compound on a substrate and subjecting the film to a heat treatment and/or a light treatment to form a silicon-cobalt film having a Co/Si atomic ratio of 0.1 to 10.

Claim 5 (Cancelled)

Claim 6 (Previously Presented): The method of claim 4, comprising subjecting the film to a heat treatment.

Claim 7 (Previously Presented): The method of claim 4, comprising subjecting the film to a light treatment.

Claim 8 (Previously Presented): The method of claim 4, comprising subjecting the film to a heat treatment and a light treatment.

Claim 9 (Previously Presented): The method of claim 4, comprising forming said coating film on a substrate and subjecting the film to a heat treatment and/or a light treatment to form a silicon-cobalt film having a Co/Si atomic ratio of 0.5.

Claim 10 (Previously Presented): The method of claim 2, wherein monovalent organic group represented by X in the formulae (1a), (1b), (1c) and (1d) is selected from the group consisting of an alkyl group having 1 to 12 carbon atoms, an alkenyl group having 2 to 12 carbon atoms, an alkynyl group having 2 to 12 carbon atoms, and an aromatic group having 6 to 12 carbon atoms.

Claim 11 (Previously Presented): The method of claim 10, wherein the silicon compound is a compound represented by formula (1a).

Claim 12 (Previously Presented): The method of claim 10, wherein the silicon compound is a compound represented by formula (1b).

Claim 13 (Previously Presented): The method of claim 10, wherein the silicon compound is a compound represented by formula (1c).

Claim 14 (Previously Presented): The method of claim 10, wherein the silicon compound is a compound represented by formula (1d).

Claim 15 (Previously Presented): The method of claim 4, wherein the silicon compound is at least one compound selected from the group consisting of n-pentasilane, iso-pentasilane, neo-pentasilane, n-hexasilane, n-heptasilane, n-octasilane, n-nonasilane, tetrachlorosilane, tetrabromosilane, hexachlorodisilane, hexabromodisilane, octachlorotrisilane octabromotrisilane, cyclotrisilane, cyclotetrasilane, cyclopentasilane, silylcyclotetrasilane, silylcyclotrisilane, silylcyclopentasilane, cyclohexasilane, heptasilane, cyclooctasilane, 1,1'-bicyclobutasilane, 1,1'-bicyclopentasilane, 1,1'-bicyclohexasilane, 1,1'-bicycloheptasilane, 1,1'-cyclobutasilylcyclopentasilane, 1,1'-cyclobutasilylcyclohexasilane, 1,1'-cyclobutasilylcycloheptasilane, 1,1'-cyclopentasilylcyclohexasilylsilane, 1,1'-cyclopentasilylcycloheptasilane, 1,1'-cyclohexasilylcycloheptasilane, spiro[2.2]pentasilane, spiro[3.3]heptasilane, spiro[4.4]nonasilane, spiro[4.5]decasilane, spiro[4.6]undecasilane, spiro[5.5]undecasilane, spiro[5.6]undecasilane, spiro[6.6]tridecasilane, hexasilaprismene and octasilacubane.

Claim 16 (Previously Presented): The method of claim 4, wherein the cobalt compound is at least one compound selected from the group consisting of  $\text{Co}_3(\text{CO})_{12}$ ,  $\text{Co}_4(\text{CO})_{12}$ , cyclopentadienyl dicarbonyl cobalt, cyclopentadienyl carbonyl cobalt difluoride, cyclopentadienyl carbonyl cobalt dichloride, cyclopentadienyl carbonyl cobalt dibromide, cyclopentadienyl carbonyl cobalt diiodide, bis(cyclopentadienyl)cobalt, bis(cyclopentadienyl)carbonyl cobalt, bis(cyclopentadienyl)dicarbonyl cobalt, methyl cyclopentadienyl dicarbonyl cobalt, methyl cyclopentadienyl carbonyl cobalt difluoride, methyl cyclopentadienyl carbonyl cobalt dichloride, methyl cyclopentadienyl carbonyl cobalt dibromide, methyl cyclopentadienyl carbonyl cobalt diiodide, bis(methyl cyclopentadienyl)cobalt, bis(methyl cyclopentadienyl)carbonyl cobalt, bis(methyl cyclopentadienyl)dicarbonyl cobalt, tetramethyl cyclopentadienyl dicarbonyl cobalt, tetramethyl cyclopentadienyl carbonyl cobalt difluoride, tetramethyl cyclopentadienyl carbonyl cobalt dichloride, tetramethyl cyclopentadienyl carbonyl cobalt dibromide, tetramethyl cyclopentadienyl carbonyl cobalt diiodide, bis(tetramethyl cyclopentadienyl)cobalt, bis(tetramethyl cyclopentadienyl)carbonyl cobalt, bis(tetramethyl cyclopentadienyl)dicarbonyl cobalt, 1,5-cyclooctadiene dicarbonyl cobalt, 1,5-cyclooctadiene carbonyl cobalt difluoride, 1,5-cyclooctadiene carbonyl cobalt dichloride, 1,5-cyclooctadiene carbonyl cobalt dibromide, 1,5-cyclooctadiene carbonyl cobalt diiodide, bis(1,5-cyclooctadiene)cobalt, bis(1,5-cyclooctadiene)carbonyl cobalt, 1,3-cyclooctadiene dicarbonyl cobalt, 1,3-cyclooctadiene carbonyl cobalt difluoride, 1,3-cyclooctadiene carbonyl cobalt dichloride, 1,3-cyclooctadiene carbonyl cobalt dibromide, 1,3-cyclooctadiene carbonyl cobalt diiodide, bis(1,3-cyclooctadiene)cobalt, bis(1,3-cyclooctadiene)carbonyl cobalt, indenyl dicarbonyl cobalt, indenyl carbonyl cobalt difluoride, indenyl carbonyl cobalt dichloride, indenyl carbonyl cobalt dibromide, indenyl carbonyl cobalt diiodide, bis(indenyl)cobalt, bis(indenyl)carbonyl cobalt,  $\eta^3$ -allyl tricarbonyl cobalt,  $\eta^3$ -allyl carbonyl cobalt difluoride,  $\eta^3$ -

allyl carbonyl cobalt dichloride,  $\eta^3$ -allyl carbonyl cobalt dibromide,  $\eta^3$ -allyl carbonyl cobalt diiodide, bis( $\eta^3$ -allyl)carbonyl cobalt, cyclopentadienyl(1,5-cyclooctadiene)cobalt, cyclopentadienyl(tetramethyl cyclopentadienyl) cobalt, tetramethyl cyclopentadienyl(1,5-cyclooctadiene)cobalt, cyclopentadienyl(methyl cyclopentadienyl)cobalt, methyl cyclopentadienyl(tetramethyl cyclopentadienyl)cobalt, methyl cyclopentadienyl(1,5-cyclooctadiene)cobalt, cyclopentadienyl(1,3-cyclooctadiene)cobalt, tetramethyl cyclopentadienyl(1,3-cyclooctadiene)cobalt, methyl cyclopentadienyl(1,3-cyclooctadiene)cobalt, cyclopentadienyl(cyclooctatetraenyl)cobalt, cyclopentadienyl(1,3-butadiene)cobalt, cyclopentadienyl(norbornadiene)cobalt, tetracarbonyl cobalt hydride, cyclopentadienyl carbonyl cobalt dihydride, methyl cyclopentadienyl carbonyl cobalt dihydride, tetramethyl cyclopentadienyl carbonyl cobalt dihydride, methyl tetracarbonyl cobalt, ethyl tetracarbonyl cobalt, bis(cyclopentadienyl)dicarbonyl cobalt, bis(tetramethyl cyclopentadienyl)dicarbonyl dicobalt, octacarbonyl dicobalt, (norbornene)hexacarbonyl dicobalt, cyclooctene hexacarbonyl dicobalt, bis(cyclopentadienyl)dimethyl dicarbonyl dicobalt, tetra( $\eta^3$ -allyl)dicobalt diiodide, bis(1,3-cyclohexadienyl)tetracarbonyl dicobalt, bis(norbornene)tetracarbonyl dicobalt, and bis(cyclopentadienyl)dicarbonyl dicobalt.

Claim 17 (Previously Presented): The method of claim 4, wherein the silicon compound is at least one compound selected from the group consisting of cyclopentasilane, silylcyclopentasilane, cyclotetrasilane, silylcyclotetrasilane, cyclotrisilane and silylcyclotrisilane and the cobalt compound is at least one compound selected from the group consisting of bis(cyclopentadienyl)cobalt, bis(tetracyclopentadienyl)cobalt, bis(1,3-cyclooctadienyl)cobalt, bis(1,5-cyclooctadiene)cobalt, bis(indenyl)cobalt, cyclopentadienyl dicarbonyl cobalt, methyl cyclopentadienyl dicarbonyl cobalt, tetramethyl cyclopentadienyl dicarbonyl cobalt, (1,3-cyclooctadiene)dicarbonyl cobalt, (1,5-cyclooctadiene)dicarbonyl cobalt, indenyl dicarbonyl

cobalt,  $\eta^3$ -allyl tricarbonyl cobalt, cyclopentadienyl(1,3-cyclooctadiene)cobalt, cyclopentadienyl(1,5-cyclooctadiene)cobalt, cyclopentadienyl(indenyl)cobalt, indenyl(1,3-cyclooctadiene)cobalt, indenyl(1,5-cyclooctadiene)cobalt, and octacarbonyl dicobalt.

Claim 18 (Previously Presented): The method of claim 4, wherein the coating film has a thickness of 10 to 100 nm.

Claim 19 (Previously Presented): The method of claim 4, wherein the coating film has a thickness of 100 to 5,000 nm.

Claim 20 (Previously Presented): The method of claim 4, wherein the heat treatment is carried out at a temperature of 150 to 500 °C for 30 seconds to 120 minutes in an atmosphere comprising hydrogen and the light treatment is carried out with light having a wavelength of 170 to 600 nm.

Claim 21 (Previously Presented): The method of claim 4, wherein the silicon-cobalt film has a thickness of 5 to 1,000 nm.

Claim 22 (Previously Presented): The method of claim 4, wherein the silicon-cobalt film has a thickness of 50 to 5,000 nm.